

1 1. A substantially pure polypeptide comprising an amino acid sequence at least 40%
2 identical to SEQ ID NO:1 or 10, wherein the polypeptide contains at least one bromodomain
3 or binds to a protein selected from the group consisting of hSNF2H, hSNF2L, NCoA-62/Skip
4 and homologues thereof.

1 2. The polypeptide of claim 1, wherein the amino acid sequence is at least 60%
2 identical to SEQ ID NO:1 or 10.

1 3. The polypeptide of claim 1, wherein the amino acid sequence is at least 80%
2 identical to SEQ ID NO:1 or 10.

1 4. The polypeptide of claim 1, wherein the amino acid sequence is at least 90%
2 identical to SEQ ID NO:1 or 10.

1 5. A substantially pure polypeptide comprising the sequence of SEQ ID NO:1 or 10.

1 6. A substantially pure polypeptide comprising the amino acid sequence of SEQ ID
2 NO:1 or 10, with up to 30 conservative amino acid substitutions, wherein the polypeptide
3 contains at least one bromodomain or binds to a protein selected from the group consisting of
4 hSNF2H, hSNF2L, NCoA-62/Skip and homologues thereof.

1 7. A substantially pure polypeptide encoded by a nucleic acid that hybridizes under
2 high stringency conditions to a probe the sequence of which consists of SEQ ID NO:2 or 9,
3 wherein the polypeptide contains at least one bromodomain or binds to a protein selected
4 from the group consisting of hSNF2H, hSNF2L, NCoA-62/Skip and homologues thereof.

1 8. An isolated nucleic acid encoding the polypeptide of claim 1.

1 9. An isolated nucleic acid encoding the polypeptide of claim 5.

1 10. An isolated nucleic acid encoding the polypeptide of claim 6.

1 11. An isolated nucleic acid comprising a strand that hybridizes under high
2 stringency conditions to a single stranded probe, the sequence of which consists of SEQ ID
3 NO:2 or 9 or the complement of SEQ ID NO:2 or 9.

1 12. The isolated nucleic acid of claim 11, wherein the nucleic acid encodes a
2 polypeptide that contains at least one bromodomain or binds to a protein selected from the
3 group consisting of hSNF2H, hSNF2L, NCoA-62/Skip and homologues thereof.

1 13. The nucleic acid of claim 12, wherein the amino acid sequence of the polypeptide
2 comprises SEQ ID NO:1 or 10.

1 14. The nucleic acid of claim 11, wherein the strand is at least 15 nucleotides in
2 length.

1 15. The nucleic acid of claim 14, wherein the strand is at least 351 nucleotides in
2 length.

1 16. The nucleic acid of claim 15, wherein the strand is at least 2200 nucleotides in
2 length.

1 17. A vector comprising the nucleic acid of claim 8.

1 18. A vector comprising the nucleic acid of claim 9.

1 19. A vector comprising the nucleic acid of claim 10.

1 20. A vector comprising the nucleic acid of claim 11.

1 21. A vector comprising the nucleic acid of claim 12.

- 1 22. A cultured host cell comprising the nucleic acid of claim 8.
- 1 23. A cultured host cell comprising the nucleic acid of claim 9.
- 1 24. A cultured host cell comprising the nucleic acid of claim 10.
- 1 25. A cultured host cell comprising the nucleic acid of claim 11.
- 1 26. A cultured host cell comprising the nucleic acid of claim 12.
- 1 27. A method of producing a polypeptide, the method comprising culturing the
2 cultured host cell of claim 22 in a culture, expressing the polypeptide in the cultured host
3 cell, and isolating the polypeptide from the culture.
- 1 28. An antibody that specifically binds to the polypeptide of claim 1.
- 1 29. A method of screening for a compound that binds to the polypeptide of claim 1,
2 the method comprising:
3 contacting a test sample with the polypeptide or a partial peptide thereof;
4 detecting the binding activity of the test sample to the polypeptide or a partial peptide
5 thereof; and
6 selecting a compound binding to the polypeptide or a partial peptide thereof.
- 1 30. A method for screening a compound that promotes or inhibits the binding of the
2 polypeptide of claim 1 and a protein selected from the group consisting of hSNF2H,
3 hSNF2L, NCoA-62/Skip, and homologues thereof, the method comprising
4 contacting the polypeptide with the protein in the presence of a test compound;
5 detecting binding between the polypeptide and the protein; and
6 selecting a compound that increases or decreases the binding when compared with the
7 binding in the absence of the test compound.

1 31. A compound that inhibits the binding between the polypeptide of claim 1 and a
2 protein selected from the group consisting of hSNF2H, hSNF2L, NCoA-62/Skip, and
3 homologues thereof, the compound being selected by the method of claim 30.